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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,283	04/01/2004	Ki-cheol Park	1572.1239	8472

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EXAMINER	
NORMAN, MARC E	
ART UNIT	**PAPER NUMBER**
3744	

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/814,283	PARK ET AL.	
	Examiner	Art Unit	
	Marc E. Norman	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/1/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 7, 8, and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Bash et al.

As per claims 7 and 24, Bash et al. discloses an indoor environmental control method comprising sensing indoor environments according to positions and controlling the indoor environment based on the sensed environment (column 8, lines 50-65).

As per claim 8, Bash et al. discloses sensing temperature and humidity (column 8, lines 53-54).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-5, 9, 11-14, 19, 22, 23, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bash et al.

As per claims 1 and 26, Bash et al. teaches an indoor environmental control system comprising a movable mobile sensor (column 8, lines 50-60) communicating with a control server to control the indoor environment based on the information received (column 8, lines 60-65). Bash et al. does not specifically state that the communication is wireless, however official notice is taken that wireless control of remote sensors is old and well known in the art and would have been obvious to one of ordinary skill in the art at the time the invention was made to apply to the system of Bash et al. for the purpose of allowing for unencumbered movement of the remote device.

As per claim 2, Bash et al. teaches sensing temperature and humidity (column 8, lines 53-54).

As per claim 3, Bash et al. teaches the mobile device being driven (i.e., configured to travel – column 8, lines 55-56).

As per claims 4, 5, 9, and 25, Bash et al. does not specifically discuss a position recognizer/mapping but does teach measuring over an array of locations and heights.

Accordingly, the remote device of Bash et al. must recognize and map it's positions, or else it is pointless to measure at various locations. It is further noted that position recognition systems for remote robots are old and well-known in the robotic arts (see for example Figure 3 of Bancroft et al.).

As per claim 11, Bash et al. teaches the mobile sensor being a robot (i.e., a mobile device configured to travel – column 8, lines 50-57).

As per claims 12 and 13, official notice is taken that home networks are old and well-known in the art. To the extent that the system of Bash et al. is applied within a building or home environment, it would be obvious to one of ordinary skill in the art to link the control device and control server through an access point of the network for the purpose of providing integrated, efficient control.

As per claim 14, official notice is taken that power line communication between servers and control devices is old and well-known in the art.

As per claim 19, Bash et al. teaches a temperature sensor, but does not specifically teach an air cleanness sensor. Official notice that remote air cleanness sensors are old and well-known in the art and would have been obvious to combine with the system of Bash et al. for the purpose of further monitoring air quality within the control environment.

As per claims 22 and 23, while Bash et al. does not specifically teach dividing and controlling the indoor region according to square lattices, it does teach sensing temperature over an array of positions and heights. Official notice is taken that such lattice-type algorithms are common features of such control softwares such as finite element analysis, and would have been

obvious to one of ordinary skill in the art for the purpose of modeling the temperature profile within the control environment.

Claims 6, 10, 16-18, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bash et al. in view of Moriyama et al.

As per claims 6, 10, 16-18, and 27, Bash et al. does not teach a voice recognition system. Moriyama et al. teaches the application of voice recognition systems to indoor climate controls. Further, official notice is taken that voice recognition systems are old and well-known in the robotic arts. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply such voice recognition systems to the system of bash et al. for the purpose of eliminating the need for manual operation (Moriyama et al., Abstract, lines 9-10).

Claims 15, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bash et al. in view of Fukumura et al.

As per claims 15, 20 and 21, Bash et al. does not teach the position recognition system details as recited. However, as shown by Fukumura et al. such video/camera based position and object recognition systems are old and well-known in the robotic arts. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply such a recognition system to the system of Bash et al. for the purpose of accurately determining the sensed positions.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc E. Norman whose telephone number is 571-272-4812. The examiner can normally be reached on Mon.-Fri., 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MN

MARC NORMAN
PRIMARY EXAMINER